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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,536	10/29/2003	Leonard M. Patt	480048.458	7818

500 7590 08/23/2005

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EXAMINER

HEARD, THOMAS SWEENEY

ART UNIT PAPER NUMBER

1654

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/696,536

Applicant(s)

PATT, LEONARD M.

Examiner

Thomas S. Heard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 20-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 20-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date June 1, 2004, June 29, 2004
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The amendments received June 1, 2005 is acknowledged and has been entered. Claims 1, 2, and 20-52 have been examined on the merits. Claims 1 has been amended and recites the new limitation, "wherein the at least one peptide copper complex comprises at least three amino acid units."

The text of those sections of Title 35, U.S. Code not included in the action can be found in the prior Office Action mailed December 1, 2004.

Claim Rejections - 35 USC § 103

Applicant's arguments filed June 1, 2005 have been carefully considered and the rejection (see page 10 of the Applicant's response) made over the teachings of Dupont et al (U.S. Patent No. 5,538,945) has been withdrawn in light of the amendment to the claim. A new ground of rejection is made in light of the amendments and is made on references of record.

Claim 1-2, and 20-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pallenberg et al (U.S. Patent 5,538,945), Pickart (U.S. Patent 4,760,051), Pickart (U.S. Patent 5,118,665), Kelly, G.S. Alternative Medicine Review (1998) and Atrium Biotechnologies product information brochure.

Pallenberg et al teaches copper complexed with peptides, both dipeptides and tripeptides, in addition to C-terminal aryl derivatives of those copper complexing compounds, column 10 and Table 3. Pallenberg et al teaches the GHK, AHK, VHK

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peptides in percent and total weight ranges of the claims in the instant application, column 9 and lines 10-14, in addition to the copper to peptide ratios of the instant application, columns 7 and lines 34-50. Pallenberg et al further teaches compositions of the above copper complexing peptides formulated for intradermal injections and for lotions, gels, and creams for topical administration and formulations for iontophoresis and liposome delivery, column 8 and lines 53-67 and column 9 and lines 1-51. Pallenberg et al teaches a method of use of the copper-peptide complexes in the treatment of hair loss. Pallenberg et al does not teach the composition of a copper-peptide complex in combination with a metalloproteinase inhibitor from cartilage or MDI complex.

Pickart (U.S. Patent 4,760,051) teaches the GHK peptide as a wound healing and **anti-inflammatory** agent and Pickart (U.S. Patent 5,118,665) further teaches the same copper-complexing peptides as anti-oxidative compounds formulated in pharmaceutical acceptable carriers, lotions, creams and gels of the instant application.

Kelly, teaches that cartilage consists of fibrous collagen composed of glycosaminoglycans, page 28. The MDI (Marine Derivative Isolates) Complex disclosed by Atrium Biotechnologies consists of glycosaminoglycans (CAS 94945-04-7). Further, the glycosaminoglycans have **anti-inflammatory** activity making them suitable for combination therapy with the GHK peptides taught by Pickart supra.

It would have been obvious to one of ordinary skill in the art to modify the composition of Pallenberg by the inclusion of glycosaminoglycans derived from fish, shark, or MDI Complex as taught by Kelly. One would have been motivated to do so

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given the desired anti-inflammatory activity of glycosaminoglycans that are a major component of cartilage as taught by Kelly and Atrium Biotechnologies. Therefore the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

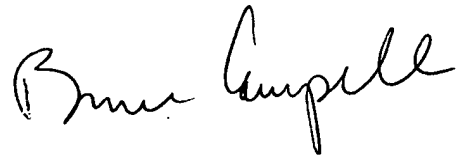
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas S. Heard whose telephone number is (571) 272-2064. The examiner can normally be reached on 9:00 a.m. to 6:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on (571) 272-0974. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TSH

A handwritten signature in black ink, appearing to read "Bruce Campell". The signature is fluid and cursive, with the first name "Bruce" and last name "Campell" clearly distinguishable.

**BRUCE R. CAMPELL, PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600**